2^4+LEN as shown in Figure 9 and (ii) it is used as indication of extended header format as shown in Figures 11 and 12, i.e. the LEN field 23 is interpreted as an extension qualifier field 27, EXQ field 27. The EXQ field 27 comprises 4 bits.

Of the four bits of the EXQ field 27 the binary values of 0000 and 0001 are reserved for use together with a further length field 29, LENE field, in the manner shown in Figures 12 and 13. In particular the least significant bit in EXQ field 27 should be appended to the seven bits in the further LENE field 29 in a manner shown in the dashed rectangle 31 in Figure 13. This is similar to what shown in Figure 10. For the EXQ binary value of 0 this will give 128 different length values and for the EXQ binary value of 1 this will give another 128 different length values.

The number of different length values that can be used with this method is given by the following general expression:

$$[2^{\text{number of EXQ bits used}}] \times [2^{\text{number of bits in LEN 29}}]$$

In a preferred embodiment of the invention an EXQ value of 0 is used to indicate mini cell lengths varying from 1 to 128 octets and an EXQ value of 1 is used to indicate mini cell lengths varying from 129 to 256 octets.

It should be noted that the length of the mini cell shown in Figures 9 and 12 is indicated by using a linear coding.

An EXQ value of 2 (binary 0010) is used to signify that the mini cell is an operation and maintenance cell, OAM cell, that comprises a header 32, and an OAM information field 33 as shown in Figure 14. The header 32 is similar to the header 21 in Figure 12. In the LEQ field 25 the binary code 11 is present and in the EXQ field 27 the binary code 0010 is present.

The EXQ code 3 (binary 0011) is used to indicate a fixed length mini cell, for example for the DAMPS system standard. Other EXQ values can be used for other systems standards or services.

EXQ code values 1xxx are used as synchronization cells; wherein xxx is timing information.

In the preferred embodiment a main requirement is that the header of the mini cell at the maximum has a length of 2 octets. Given this restriction the available bits are used in an efficient way to cover all ranges of values.

In Figures 9, 11, 12, 14 preferred sizes are indicated under the respective fields. The indicated sizes are just examples and many other sizes of the different fields can be used. Other LEQ and EXQ codes than the indicated can be used as bits that are appended to the LEN field 23 and LENE field 29.

In Figure 15 a block schema of a cell header reading device is shown. It comprises a shift register 19, a first counter 20, a latch register 30, a ROM memory 40, a second counter 50 and a multiplexor 60. A bit stream comprising the user data of the mini cells is shifted into shift register 19 at one input thereof. A clock signal controls the frequency at which the data bits are shifted into the shift register 19. The clock signals are counted by the first counter 20 which is used to extract the fixed size length field 11 of a mini cell and write its data into the register 30. The fixed length field or rather the information therein is used as address to the ROM memory 40 which has been configured with the mapping table shown in Figure 5. Accordingly, an individual code, in the following referred to as length code, will correspond to a specific length of the user data. From the ROM memory 40 the size of the user data (mini cell size minus the size of the header) is read and is sent to the second counter 50 which controls the multiplexor 60 such that at the output 61 thereof the user data will appear. Suppose the first counter 20 reads the binary code 011 from the user data channel. This code is used as address to the ROM memory and at this address the cell size 20 is stored. Accordingly the length of the user data should be 20 octets. Next the second counter 50 counts the

following 20 octets bit by bit by counting a corresponding number of clock pulses. The multiplexor 60 is shown to have an arm 62 which is movable between the indicated two positions. Initially counter 50 sets the arm 62 to the lower position shown with dashed lines and no output data will appear at output 61. When the second counter 50 receives the cell size from the ROM memory 40 it moves arm 62 into the upper position. In the upper position arm 62 connects to a line 63 which in its turn is connected to the input user data channel. When the second counter 50 has counted 20 octets it moves arm 62 back to its initial position and the correct number of octets has now been produced at output 61.

In Figure 16 the extraction of the fixed size length field 11 from the user data channel at time t_0 is indicated. At time t_0 counter 20 starts to count 20 octets bit by bit and at time t_1 counter 20 has counted 20 octets. Accordingly arm 62 will be in the upper position in Figure 15 between times t_0 and t_1.

In the cell header reading device shown in Figure 15 a predefined number of length codes and cell sizes are stored in ROM 40. In the cell header reading device shown in Figure 17 a RAM memory 70 is used to which length codes and cell sizes are written from a control system 80. In this manner it is possible to configure different specific mini cell sizes for individual mobile telephone systems.

The mini cell sizes stored in ROM 40 are global in the sense that an individual length code, for example 101, relate to all connections which use mini cells with this length code.

It is, however possible to have a specific mini cell size for a specific connection or for a specific physical link by using the control system 80 and the RAM memory 70 as will be described in connection with Figures 18-27.

Figure 18 is a block diagram of a cell header reading device used for implementing the extension code method. In